

Application No. 10/620,176

REMARKS

Claims 17-22, 24-27 and 53-63 are pending. By this Amendment, claims 17 and 53 are amended for clarity. No new matter is introduced. The Applicants do not intend to narrow the claims by the clarifying amendments. Applicants respectfully request reconsideration of the pending rejections in view of the following remarks.

Rejection Under 35 U.S.C. § 112, Second Paragraph

The Examiner rejected claim 17 under 35 U.S.C. § 112, second paragraph as being indefinite. In particular, the Examiner asserted that the word "irradiate" in lines 2, 4 and 6 of the claim were not clearly referring to the same irradiation. While Applicants believe that the claims were previously clear, Applicants have amended claim 17 and correspondingly claim 53 for clarity. Applicants thank the Examiner for the suggested correction. Applicants respectfully request reconsideration of the rejection based on the following comments.

Applicants have amended claim 17 as suggested by the Examiner except for the use of the term said. Applicants assert that the use of the term "the" is equivalent to the term "said" and is appropriately clear with respect to antecedent reference. In view of the clarifying amendment, the claims are definite. Thus, Applicants respectfully request withdrawal of the rejection of claim 17 under 35 U.S.C. § 112, second paragraph as being indefinite.

Rejection Over Payne et al.

The examiner rejected claims 17-22, 24-27 and 53-63 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 6,160,944 to Payne et al. (the Payne patent). The Examiner indicated in the Office Action that the previous ambiguous claim language allowed for a broad interpretation in which the irradiation in one portion of the claim was not necessarily along the

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direction referred to in other portions of the claim. In view of the clarifying comments above, this broad claim construction is no longer appropriate.

In the Examiner's response to Applicants' previous arguments, the Examiner indicated that Applicants' arguments hinged on a narrow definition of the word "gradient." With all due respect, this is not quite what Applicants' were asserting. Applicants' arguments are based on the **direction** of the gradient relative to the radiation that changes the index-of-refraction and not the scope of the term. Payne teaches the formation of a structure with periodically varying index of refraction through irradiation that changes the refractive index perpendicular to the irradiation direction. In contrast, Applicants' claimed invention refers to changes in the index of refraction **along the irradiation direction, not perpendicular**. In view of the structural clarification in claim 17 in the context of the claimed method, Applicants respectfully assert that Payne does not render Applicants' invention *prima facie* obvious.

With respect to claim 53, Payne does not teach a composition gradient with respect to the dopant. Thus, Payne does not teach all of the features of this claim. It follows that Payne does not render claim 53 and dependent claims 54-63 *prima facie* obvious.

Since Payne does not render Applicants' claimed invention *prima facie* obvious, Applicants respectfully request withdrawal of the rejection of claims 17-22, 24-27 and 53-63 under 35 U.S.C. § 103(a) as being unpatentable over the Payne patent. While Applicants do not acquiesce in the Examiner's assertions regarding the dependent claims, these issues are presently moot in view of the deficiencies of Payne described above.

### CONCLUSIONS

In view of the foregoing, it is submitted that this application is in condition for allowance. Favorable consideration and prompt allowance of the application are respectfully requested.

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The Examiner is invited to telephone the undersigned if the Examiner believes it would be useful to advance prosecution.

Respectfully submitted,

A handwritten signature in black ink, reading "Peter S. Dardi". The signature is fluid and cursive, with the first name "Peter" and last name "Dardi" clearly legible.

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